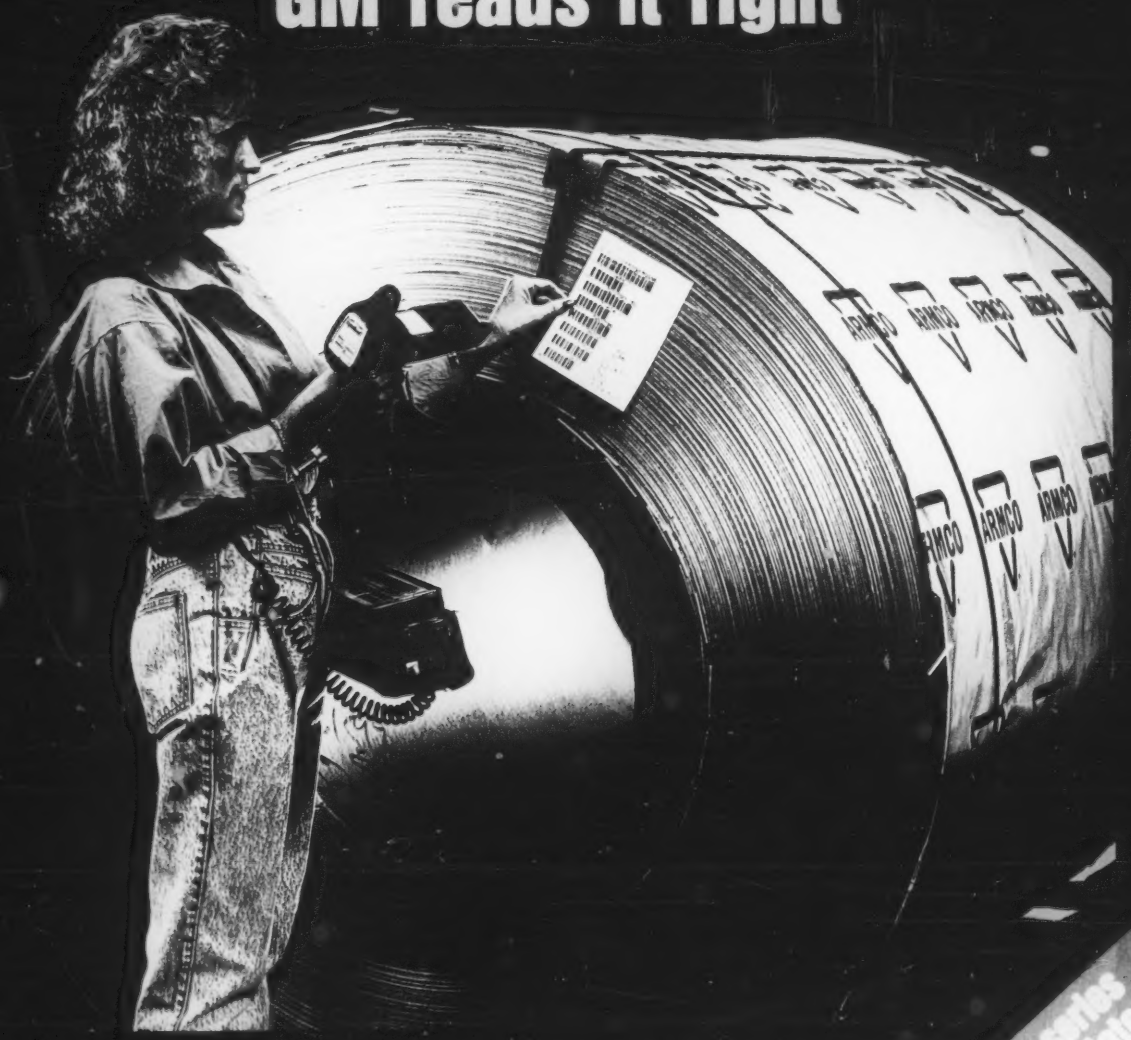
A HUEBCORE PUBLICATION

PurchasingWorld®

MANAGING THE BUSINESS OF BUYING

NOVEMBER 1990

EDI
GM reads it right



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- Software: goods or services?

New series Strategic Materials Management

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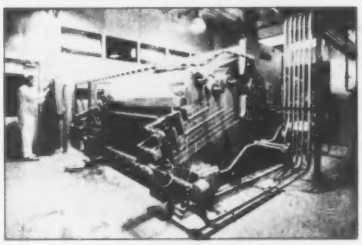

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PurchasingWorld

Ideas need training

Good ideas on purchasing are getting easier to find. Maybe it's the sense of urgency that surrounds our manufacturing industries today.

Or it could be that there really are a lot of good ideas that are positioning the purchasing discipline firmly at the forefront of operational improvement and profitable performance. That is exactly the rationale for our Strategic Materials Management series which will appear every month through 1991.

And it is almost to the word the title of a new book by Michael Harding called *Profitable Purchasing* **(240 pp. Industrial Press, New York, $29.95)**

In it, Mr. Harding tells us that the buzz words are winning more than our attention.

Just-in-time is one such concept. Author Harding is quick to point out that there is no such thing as just-in-time purchasing, but that there is "a purchasing strategy that supports and complements a plant practicing just-in-time manufacturing."

That may seem like a small distinction, but it is one that he believes is central to understanding that just-in-time is a business strategy and not a materials tactic. Inventory reduction, for example, is one of the many byproducts of JIT—but not its goal, he says.

Flowing from its successful implementation are flexibility, speed in adapting to changing customer requirements, improved quality, compressed production cycles, improved communication among people who directly impact quality, and elimination of all forms of waste: "Waste of time, waste of processing, waste of checking each others work, waste of count, waste of handling and moving, waste of kitting etc."

According to Mr. Harding, the JIT concept has made time and quality competitive weapons.

Mr. Harding acknowledges that he didn't start out to write a book on just-in-time, but that the concept, by virtue of its pervasiveness, lent a theme to the overall direction of the book. Half of its 15 chapters are devoted to discussion of price, negotiation, the legal aspects of purchasing, contracts, quality, MRO, and the like.

This book will be a good seller. Strong doses of common sense and valuable personal opinion about purchasing concepts and tools available to the professional purchaser will make it so.

And there's enough vision for anyone:

"The first strategy of purchasing is to educate and train itself to be a business partner with the firm's top management. If buyers are now clerks, they must train to become resource managers. If purchasing managers are bosses, they must become coaches and profit managers. If purchasing directors are politicians, they must become visionaries. The vision of the function and of the future will be translated to reality through training, and this will be no small task."

If the results of our recent reader survey on dollars allocated to the purchasing department for training are representative, you had better fight hard for more training dollars in your 1991 budget meetings. One-third of respondents had *no* money budgeted; about 25% budgeted just $100-700; and another third earmarked $700-2000. Only 10% budgeted more than $2000.

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PW PREDICTS

Do you remember?

The Iraqi-induced oil shock is leading many forecasting wizards to revise their expectations from near-recession to downturn. The gloom and doomers, meanwhile, are reporting that the oil shock will now be the difference between a minor economic correction and a severe one. While Saddam Hussein has certainly thrown a wrench into the works, the evidence has yet to verify that a recession is in progress, or that one is imminent.

What many of my colleagues fail to remember is that the economy's long-run prognosis, before the external shock (oil), was improving. Inflation was retreating (ever so gracefully); inflation-adjusted gross national product for the first-half of 1990 was adequate; wage pressures were subsiding as resources were quietly being reallocated due to rising unemployment, export orders were looking to be a continued source of strength; and, most important, the Federal Reserve was breaching the data warp and beginning to ease its grip on monetary policy.

Key to the recession forecast scenario is the belief that the pervasive impact of rising oil costs on prices will constrain the Fed's ability to steer domestic economic performance through the lowering of interest rates. This assumption, however, is in error. An analysis of the underlying fundamentals indicates that no excess demand (or too much money chasing too few goods) exists, which is the essential ingredient behind inflation. Transitory oil shocks incite rising prices, not inflation. If annualized real GNP growth dips below the 0-2.5% soft-landing target, the Fed is sure to respond. The Greenspan camp, which has historically followed a course of gradualism, is not going to initiate preventive medicine and risk erring on the side of excess easing and excess inflation—nor do we want them to.

Returning to the fundamentals of the moment, the fallout from higher oil prices, in terms of inciting a recession, is probably greatest next year. In the short run, rising oil prices have offsetting effects on GNP. While consumers will have purchasing power reduced, inventory builds will offset the drag being applied by consumer spending. Businesses, aware that the future holds the potential for rising prices, will attempt to increase inventory holdings for two reasons: future production costs will be higher because energy tags will be up; rising prices push profit margins up on current stocks. Always tempering inventory accumulation, however, are the threats of falling prices and declining sales in the future, at which times excess inventory is costly to possess.

The magnitude of the near-term inventory build depends upon the perception of business leaders as to the sustainabilty of oil in fueling higher prices. Unfortunately, the stronger the short-run inventory build, the greater the long-run threat.

If company decision-makers feel that higher oil prices will be sustained, the incentive for business investment is reduced, because higher energy costs lower the productivity of capital. Declines in capital spending, however, aren't felt for six to 12 months, implying that some other engine of growth will be needed to keep the current expansion flying and offset a capital spending slowdown in 1991.

Admittedly, there are ample reasons for legitimate concern, but unlike previous oil disturbances, the economy's domestic health today, in terms of inflation, is much different now than it was then. The recessions of the mid-'70s and early-'80s were, if not initiated, certainly worsened by the need of the Federal Reserve to deal with an existing inflation spiral. No such problem exists today, after four years of tight money—with the exception of the brief period following the 1987 stock market crash—by the Fed.

It's true that the annual rate of inflation, as measured by the consumer price index (CPI) before the Iraqi troubles, was stubbornly remaining in the vicinity of 4.5-5%. This level might be misleading, however, since quality advances and substitution possibilities are not accounted for. The CPI is a fixed basket of goods and it may be that a lower-priced substitute exists for some of the CPI components. The CPI also fails to see a difference in higher prices and higher prices due to quality improvements.

When the dust finally settles in the Middle East, the Iraqi crisis will probably be seen as an economic complication which did little to change the underlying fundamentals, not as an economic turning point toward recession.

By John Sheridan, chief economic editor

Demand for gas growing

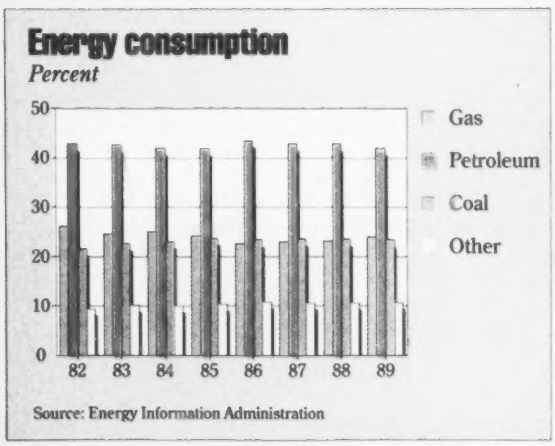
Overview: The Energy Information Administration reports that natural gas accounted for 22.4% of the U.S. energy market in 1989.

Supply: After a shortage of natural gas in the early 1970s and passage of government regulation, coal and nuclear energy were perceived as cheaper fuels with more reliable supplies. Twenty years later, the pendulum has swung back. Oversupply has made gas cheap, environmental concern has made it desirable, and the easing of government regulation is making gas the fuel of choice for the nineties.

Demand: With natural gas supplying the heating fuel for most existing homes, 44% of all gas sales come from the residential sector. Future sales growth to this market will likely be less than 1% annually, however, with negative growth possible if winters turn unseasonably warm. In the long run, growth in the customer base and marketing of more gas appliances should offset energy conservation activities and keep residential demand trending upward.

Industrial gas consumption has been falling since 1973, despite increasing levels of production, primarily because of technological (less energy required per unit of output) and structural (shift away from heavy manufacturing) changes. But, new technological advances and the repeal of the Fuel Use Act in 1987 are quietly reviving industrial and commercial gas demand.

Outlook: Despite the maturity of its traditional sources of demand and its dependence on weather, population, and government, gas is forecast by the American Gas Association to capture 28% of the energy market in 2010. In the commercial building market, Standard & Poor's is expecting a changeover from electricity to gas cooling systems, currently being imported from Japan.



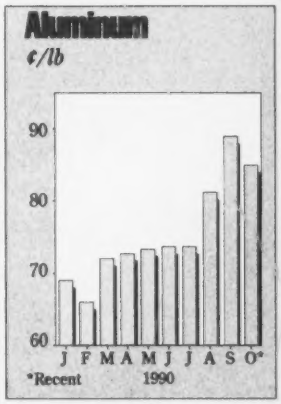
Source: Energy Information Administration

Copper turnaround to continue

August inventory advances led to an easing of prices, but the market was caught off guard in early September by a temporary price boost. In the seven days prior to September 12, the red metal's price climbed 20¢, reaching $1.51/lb on the London Metal Exchange (LME). Inventories, however, suggest that the latest turnaround is likely to last. Since mid-September, prices are again following a downward tilt. On October 1, the Comex Exchange price was $1.25/lb, while the price on the LME stood at $1.26/lb. Though speculative players may induce short-term blips in prices, copper's long-run trend is down, possibly to below $1/lb.

Supply concerns shocking cobalt

In early July, supply concerns and strong demand combined to push cobalt prices from a range of $7.70-8.20/lb to between $12.60-12.80/lb, which lasted until mid-September, when prices eased to $12.50-12.75/lb. The first of October brought new supply concerns, however, inciting another burst in prices. Following a Zaire mine cave in, cobalt is now trading in a range of $13.50-14.50/lb. Until this latest incident, supplies appeared in good shape with an easing of prices likely.



Aluminum prices to ease

On September 17, unalloyed ingot pierced the $1/lb barrier for the first time in more than a year on the London Metal Exchange (LME). Early October saw prices slide, with the domestic price falling to 84¢/lb and the LME price dropping to 87¢/lb. One industry source believes that the fundamentals just aren't there to support a price of over 85¢/lb for any sustained period of time. While ingot exports are up over 50% from year-ago levels, domestic deliveries are off 45%.

Domestic mercury falls $20

Domestic dealers have reduced prices for mercury sold in 76/lb flasks in lots of 50 or more. The most recent price is $240 a flask, which is $20 below the previous market price. In Europe, quotes for mercury remain firm at $180-200 per flask.

Prices in 1991

The transitory oil runup is sure to affect costs, but underlying supply and demand fundamentals for the majority of industrial commodities will hinder any sustainable price burst. Prior to the August 2 Iraqi aggression, the general sluggishness of domestic economic activity was in the process of subduing inflationary pressures. The combination of relatively weak end-markets and lower material input costs had clearly eased finished goods inflation.

It's obvious that if the Persian Gulf troubles intensify, oil's short-term threat to energy prices—and therefore production costs—is substantial. However, the 1991 outlook for both inflation and our economy's performance remains positive.

Analysts from the WEFA Group project, assuming no worsening in the oil picture, that prices will firm only gradually over the next 12 months, primarily because of an improvement in business activity. Of the major industries reviewed, WEFA foresees only transportation equipment and industrial chemicals displaying inflation of over 4% next year (see chart).

Metals prices should be relatively tame. WEFA forecasts iron and steel prices to rise 2.8% next year, with Data Resources, Inc (DRI), expecting tags to firm only 2.5%. For nonferrous metals, DRI believes prices will move up 6% in 1991. WEFA, however, says nonferrous price pressures will be less than 3%.

Oil costs will drive the overall producer price index higher because the energy component is heavily weighted. In terms of individual commodities, however, the intensifying of inflation is likely to be less severe. Lackluster demand and the risk of losing market share will limit the ability of producers to pass costs downstream. Capacity additions and well-balanced inventories will also work to keep a lid on prices in 1991.

Current price forecast

Percent change, year over year

	1990	1991
Industrial commodities	3.6	4.8
Energy	12.2	11.1
Textiles & apparel	2.5	3.1
Industrial chemicals	-1.4	5.1
Plastic resins	-5.9	2.9
Rubber & plastic	1.4	2.8
Lumber & wood	3.3	3.0
Pulp & paper	2.1	1.4
Iron & steel	-1.1	2.8
Nonferrous metals	-5.6	2.5
Machinery & equipment	2.9	3.6
Transportation equipment	3.4	4.8
Furniture & household durables	2.2	2.8

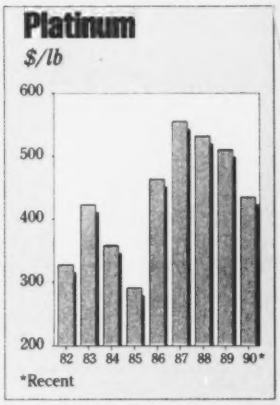
1989 equipment leasing strong

In a survey just released by the American Association of Equipment Lessors (AAEL), new leasing business volume in 1989 rose to $41 billion, an increase of 11% over 1988's level. The AAEL, located in Arlington, VA, reports that medical and manufacturing equipment made the strongest showings last year, up 4.2 and 6.7 percent, respectively. While new leases for the overall industry continued to grow in 1989, market declines occurred in trucks and trailers, computers, aircraft, and telecommunications. Computer and aircraft assets continue to be the most leased.

Platinum metal tags plunge

On October 21, platinum was trading at $514/troy oz on the U.S. Mercantile Exchange. Since that time, the precious metal's price has plummeted more than $80. In fact, the October 1 price of platinum, which stood at $432/oz, was the lowest in four years. While palladium is easing as well, now at $97.50/oz, rhodium remains firm, at $5350/oz.

Platinum's price drop appears to be the consequence of recession speculation, given its strong ties to the industrial sector. The longer-term view by many industry insiders, however, is that this is just a temporary lull before the next price burst. The combination of rebounding Japanese demand next year, increasing emission standards and potential supply troubles should result in a more bullish market down the road.



EG market is firming

At the beginning of last spring, excess supply of ethylene glycol (EG) was surfacing, prices were eroding and demand was waning. The Middle East chaos incited by Hussein, however, has allowed the EG market to tighten up quickly. A first-quarter market slowdown led to production cuts and a drawdown of inventories, which now have producers running plants at capacity. Traders are stockpiling supplies to hedge against potential output troubles from one Saudi facility, as well as upcoming antifreeze demand, which is expected to be strong this winter. The domestic contract price for EG is now 27-29c/lb.

High-temp plastics

Overview: High-temperature plastics will replace metals, glass and ceramics in many markets over the next five years. The Freedonia Group expects future demand for traditional plastics to remain relatively flat. The Cleveland-based researchers, however, report that advanced polymers, such as thermoplastic polyesters, polyphenylene sulfides, polysulfones, advanced composites and polyimides will witness yearly growth in excess of 11% through 1994.

Demand: While the greatest end-market growth (10%) will come from the aerospace and aviation industry, the electrical and electronics sector will continue to be the leader in high-temperature plastics in terms of quantity demanded, despite forecasted growth of only 3.5% per year through 1994. Activities such as wave soldering and vapor-phase soldering, which require short-term, high-production temperatures, are driving current needs.

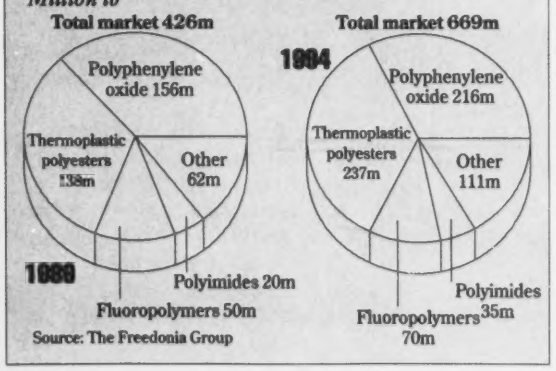
The appliance market will continue as the second largest, volumewise, but phenolics has been replaced by polyphenylene oxide as the product leader. Also during the next half-decade, automotive under-the-hood needs will spur 10% annual growth from that sector, with industrial consumption rising 8% per year.

Supply: Though the industry is fragmented among 30 or more firms and overall industry concentration is low, several key engineered grades of high-temperature plastics are supplied by only a few companies. Currently, producers of high-temperature plastics are seeking to increase the value of their products by downstream integration into distribution, manufacturing and compounding.

Outlook: In 1994, thermoplastic polyester consumption is expected to reach 237 million lb, making it the dominant high-temperature resin.

Advanced high-temp plastics

Million lb



Source: The Freedonia Group

Yarn market getting stronger

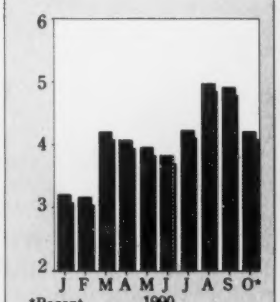
No significant improvement has occurred thus far this year in the yarn market, but sectors of strength are appearing, generating new optimism. In plied yarns, demand is improving for 12/2 and 16/2 combed and carded cotton. The ring-spun market is also witnessing a moderate revival, as is spun polyester and dyed yarns. Though the open-end yarn market continues to struggle, with T-shirt sales currently off, expectations are that demand here will improve by December.

Versatile PVC going strong

According to The Freedonia Group, Cleveland, polyvinyl chloride will penetrate further into existing markets and exploit new opportunities in the years to come. Growth is expected to top 4% annually through 1994. Already PVC is the most versatile plastic and the second highest volume resin in North America. The major end users of PVC will continue to be pipe, pipe fittings and conduit, which currently account for over 40% of the North American market. Partially fueling PVC's increasing consumption will be vinyl windows and doors in the construction sector. However, the strongest demand is expected to surface in the medical market, where growth is expected to top 7%.

Nickel

$/lb



Nickel tags sinking fast

The high level of volatility which has plagued the nickel market for most of the year has not subsided. Early October saw the price of nickel in a free fall toward $4/lb. Just three weeks after the year's highest London Metal Exchange (LME) price of $5.39/lb was established (September 12), nickel's price lost more than $1, to $4.24/lb. A number of industry analysts perceive $4.00-4.50/lb to be the appropriate range for nickel according to current supply and demand factors.

Global styrene capacity growing

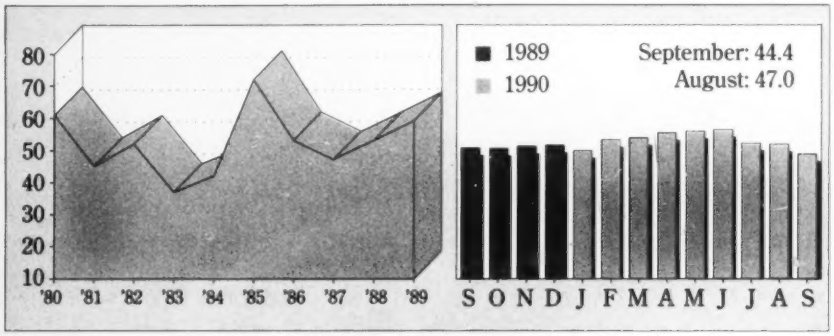
Worldwide styrene production facilities are scheduled to appear, worrying many observers, who warn of severe overcapacity. Many of the new plants are scheduled to appear in the Far East, with that region's capacity increasing by 2.3 million metric tons per year between 1990-1994.

BUSINESS DATATRAK

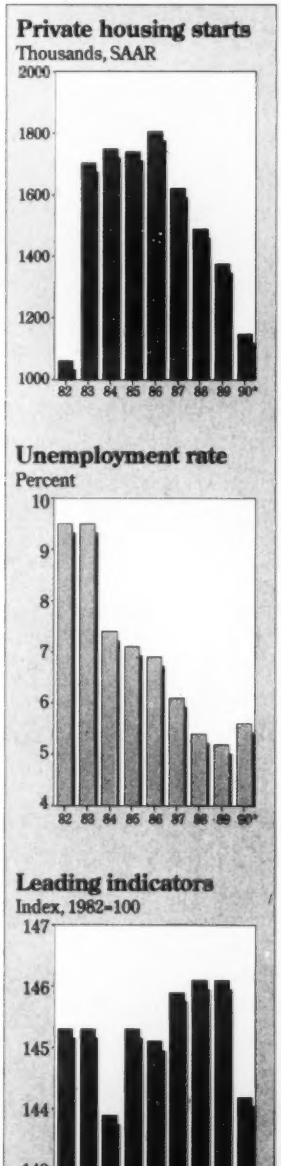
By John Sheridan, chief economic editor

N. A. P. M. business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)



Leading indicators



KEY ECONOMIC TRENDS

What's beyond pain

A football coach recently explained to me that on the really great hits, the poor soul being attacked moves beyond a state of pain and into a state of euphoria. Unfortunately for the economy, the question is not what lies beyond our current economic strain, for the answer is simply, at this moment, more pain. The challenge now is to forecast the magnitude of this additional hurt.

Economists wanting to report the dismal don't have to work very hard to put together enough rhetoric to sound a convincing cry for recession. Housing starts haven't been this wretched since the last recession (see chart). The purchasing managers' index is clearly reporting that the brief burst in manufacturing last spring has now retreated (see chart above). The widely followed barometers of consumer sentiment, the University of Michigan index and the Conference Board index, both plummeted in August, with consumers in September continuing to be wary. Oil costs, meanwhile, are propelling prices throughout our entire system and domestic decay is already showing up in the form of a tightening job market (see chart).

While these are signals of legitimate concern, a convincing argument can be assembled which stops short of predicting recession.

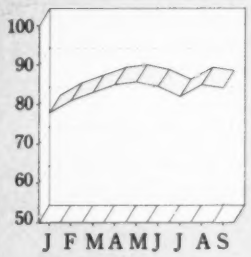
First, while more than half of the 11 components in the leading economic index had a negative weight in September, the composite index is not in a state of sustained decline, traditionally a prerequisite for recession (see chart). Moreover, the index is often criticized for giving a disproportionate weight to manufacturing, the sector hit hardest by the Fed's inflation-taming strategy.

Second, the WEFA Group is reporting that recent hikes in foreign interest rates are behind the now-weakening dollar. The devaluation of the dollar, especially against the Japanese yen and the German mark, is expected to persist, boosting exports and improving the gross national product (GNP) picture for quite some time.

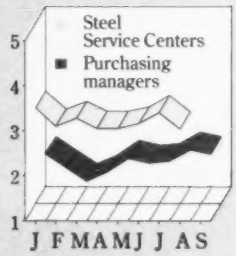
Also helping GNP is our massive armed forces mobilization. U.S. military presence in Saudi Arabia nearly eliminates the possibility of a contractionary fiscal policy either this year or next, regardless of what happens with taxes. By the time the dust settles in the Middle East and defense spending resumes its fu-

Steel

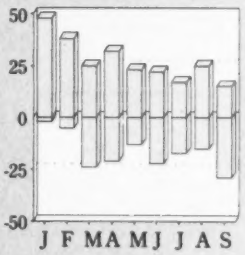
Operating rates



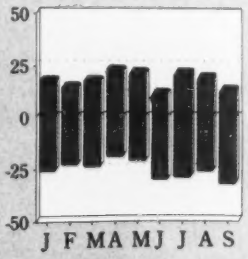
Inventories
(months supply on hand)



Demand (Steel Service Centers)
(Percent of respondents)



Demand (NAPM)
(Percent of respondents)



Source: Steel Service Center Institute
NAPM Steel Buyers Committee

ture downward tilt, consumer confidence will have been revived.

The Fed's soft landing has clearly infected some regions and industries of the country with recessionary conditions. Amid the gloom there are some positive signs, however, that the overall economy will avoid a classic correction and continue along in a growth-recession mode, which is a period of pronounced decline in the rate of growth of a still-growing economy.

Further deterioration in the main economic indicators (such as unemployment) is likely. In terms of eliminating growth completely, however, the economy may have not yet reached its point of maximum pain tolerance.

METALS SCENE

Steel

To date, the troubles in the Persian Gulf have had little impact on the world steel market. While the direct effect of rising oil prices has been minimal thus far, the longer-term effects could be very troublesome. The oil shock has produced an atmosphere of uncertainty which is likely to stimulate a scaling back of capital and discretionary projects by decision makers, thus lowering future steel demand.

Despite substantial destocking and price erosion over the past 12 months, producers in the U.S., Japan and Western Europe continue to perform well.

Surprisingly, the U.S. market remains relatively tight. Steelmakers have been announcing price hikes, but the environment of slow growth is making it hard for higher tags to be realized. Discounting from list prices is being reported as common. With the firming of oil prices capable of dragging steel's end-markets down even further, one would think upward pressure on prices is unlikely.

A possible steel shortage, however, may be in the making. WEFA notes that if the economy absorbs the current oil shock and business activity manages to improve, the possibility of labor disruptions, maintenance-related facility outages and material supply problems could bring about soaring steel prices sometime during the next six months. Labor contracts at the nation's largest steel producer, USS, expire at the end of January. Moreover, prices for key inputs such as scrap, zinc and nickel have been pressured higher of late.

Though the shortage scenario is a possibility, it's more likely that no shortage will materialize, demand from the transportation, construction and capital goods end-markets will weaken further, and prices will either remain stable or ease. Buyers need to keep an eye on steel inventory-to-sales ratios. Inventory of the nation's steel buyers is now at its highest level since 1988, indicating that some hedging is already occurring.

Import prices
(Compared to domestic)

STEEL BUYERS
ABOVE 29%
SAME 29%
SLIGHTLY BELOW 42%
SUBSTANTIALLY BELOW 0%

SERVICE CENTERS (CARBON)
ABOVE 2%
SAME 74%
5-10% BELOW 24%
11-20% BELOW 0%
OVER 20% BELOW 0%

Scrap

Prices for No. 1 heavy melting scrap rose to $116/ton in August due to a combination of factors. None of them, however, permanently shifted the demand or supply curves, which means that the current price boost is simply transitory.

Three factors had a definite impact on the market: the auto sector's retooling and model-year changes which temporarily drained the market of prompt industrial scrap; greater-than-expected production; and continued high levels of scrap exports. Concerns that a shortage might persist induced buyers to build stocks, forcing prices higher.

The WEFA Group believes prices have now peaked for No. 1 heavy and that a market correction, with prices easing $2-6 per ton by year-end, is in progress.

REGIONAL PERSPECTIVE

Purchasing reports

The NAPM's national Report on Business expresses the views of over 300 purchasing executives, across 20 industries, located in 50 states. The national purchasing managers' index accurately charts the course of the economy providing timely notice of turning points. Regional variances, however, are often smoothed out in national averages. Numerous city and state purchasing reports exist which provide a closer look at region-specific performance. In these indexes, a reading above 50 means expansion, while a reading below 44 signals recessionary conditions.

Massachusetts: The manufacturing economy took a big hit in August, with the economic index falling 8.4% to 46.9. High levels of export activity and new orders kept the region strong in July when the national index turned down, but new export orders in August were reported down by 25% of the buyers surveyed. Though production remained up in August (53.4), rising inventories (52.8), falling employment (39.7) and rising prices could begin to seriously affect the area.

Rochester: Improving-to-stable conditions were reported by the majority of purchasers in August. Employment plans are stable, delivery times are as expected, and new order leadtimes aren't showing any change. The three-month forecast was fairly pessimistic, however, because of concern over inventory accumulation and rising prices.

Detroit: Near-recession conditions were being expressed by Detroit buyers in August, as the index fell to 44.1. Traditionally, a reading of 44 in these indexes signals recessionary conditions. The auto industry is applying most of the drag, registering 36.2, while the non-auto index stands at 48.5. If oil prices keep rising and a fall auto strike at GM becomes reality, conditions here could get worse.

Cleveland: The oil-and-related-prices jump threatens to slow this region even further. Employment activity continues to worsen. Inventories are being selectively reduced, but generally appear in-line. New orders were higher in August, but speculation was that upcoming orders would be down because of economic uncertainty. Buyers report that recession here is a very real possibility.

Chicago: Inventories are moving down in response to diminishing expectations about the future. Chicago's business barometer measured 49.2 in August, but the yearly average remains slightly above 50. The production slowdown that began last summer is persisting. New orders, which fell drastically in July, were flat in August, with order backlogs continuing to shrink.

Arizona: The economy is growing more slowly since the Iraqi crisis began. Speculative and real effects of the oil run-up are tempering activity. While employment, production and new orders all rose in August, their growth rates were slower than in July. Inventories are being cautiously trimmed by buyers, with delivery times lengthening slightly.

Hiring activity: Research shows that year-to-year hiring patterns closely track economic performance, regionally or nationally. Over the past year, employment activity in few regions has escaped the Fed's strategy of slowing growth in order to tame inflationary pressures. According to The Conference Board, help-wanted advertising is down in every region but the west south central (see table).

Help-wanted advertising

Index (1967=100), SAAR

	July 1990	July 1989
National Index	132	149
New England	78	109
Boston	84	107
Hartford	64	111
Middle Atlantic	61	76
New York	40	49
Philadelphia	50	66
Pittsburgh	95	102
East North Central	90	103
Chicago	85	105
Cincinnati	151	159
Cleveland	63	79
Detroit	47	56
Milwaukee	63	72
West North Central	91	99
Kansas City	114	128
Minneapolis	80	90
Omaha	167	182
St. Louis	68	69
South Atlantic	144	182
Atlanta	196	230
Baltimore	126	161
Charlotte	183	188
Miami	116	149
East South Central	160	173
Birmingham	196	176
Memphis	129	139
West South Central	203	194
Dallas	128	146
Houston	327	296
New Orleans	144	144
Oklahoma City	128	127
San Antonio	162	148
Mountain	297	308
Denver	183	211
Phoenix	354	364
Salt Lake City	437	417
Pacific	242	261
Los Angeles	144	166
Sacramento	575	515
San Diego	547	670
San Francisco	238	252
Seattle	334	294

CURRENT PRICES

Looking past the obvious

Purchasing pros must not lose sight of the underlying supply and demand fundamentals in their current day-to-day decision making. While the propaganda is thriving on soaring oil costs and worse-case Persian Gulf scenarios, a closer look at the economy's price/inflation foundation is necessary.

Despite forecasts of double-digit energy cost increases this year and next, the impact of higher fuel costs won't be uniform across all industries. During the first six months of 1990, as reported by the producer price index, the industrial commodity inflation rate slowed to 2.1%. Disinflation (rising prices at a declining rate) was witnessed in most major industries, including: rubber and plastics; pulp and paper; machinery and equipment; lumber and wood products; and furniture and household products. Deflation (falling prices) was actually occurring in chemicals and metals. The same weak-end markets which were mitigating industrial prices prior to Iraq's aggression will now temper downstream directed price hikes from domestic producers.

Nevertheless, with regard to the industrial commodities index, rising oil prices will have a significant impact. The industrial inflation outlook has now been revised up to 3.5% this year and 4.5% in 1991.

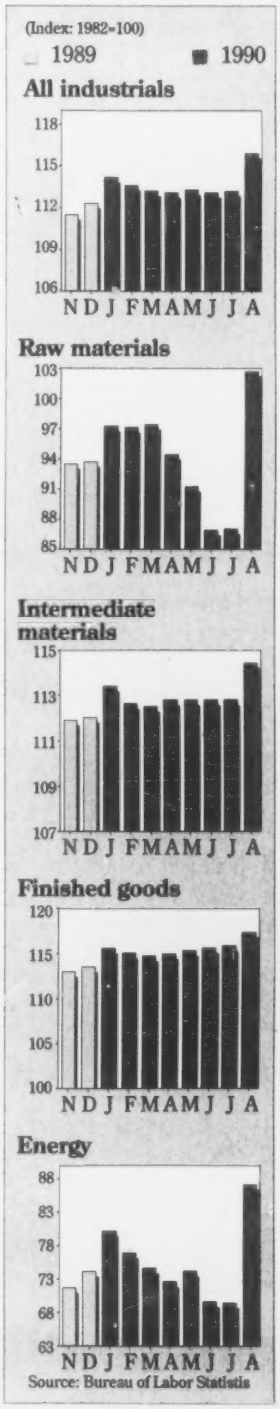
But, if production facilities are intact at the conclusion of the Middle East crisis, it could be that excess supply will exist on the market, leading to lower oil prices than existed prior to Hussein's aggression of August 2, implying substantial disinflation in the future.

This month's breakdown

Index 1982=100

	Latest level	Month ago	Year ago
Bearings	131.0	0.1	4.5
Bolts, nuts, etc.	117.5	1.0	3.0
Chemicals, inorganic	112.4	-0.3	1.4
Chemicals, organic	109.3	-0.1	-3.7
Concrete products	113.7	0.4	1.8
Corrugated containers	107.9	-0.5	-4.1
Cutting tools, small	113.1	0.0	1.3
Electrical lamps (bulbs)	130.7	0.2	4.6
Electronic components	117.7	-0.8	-1.7
Fans and blowers	123.8	0.2	3.5
Foundry and forge products	117.3	0.1	1.9
Fuel oil (residual)	45.4	9.9	-5.6
Furniture, commercial	133.6	0.1	2.7
Gasoline	82.1	17.3	30.1
Glass, flat	107.4	0.0	-1.5
Glass containers	120.7	-0.1	4.1
Gypsum products	102.5	-2.7	-5.0
Hand tools	135.2	0.1	5.5
Hand tools, power driven	121.5	-0.1	3.8
Industrial furnaces	127.3	-0.3	1.7
Integrating and measuring instruments	126.9	-0.2	5.5
Internal combustion engines	121.4	1.5	4.8
Lubricating oil	115.7	1.8	3.6
Lumber millwork	130.2	0.2	1.7
Material handling equipment	115.5	0.1	2.6
Metal containers	114.3	0.2	2.1
Metal mill shapes	132.4	2.4	-2.6
Metal tanks	114.3	3.4	2.6
Metalworking machines	123.1	0.2	3.6
Motors and generators	133.8	0.1	3.2
Motor trucks	127.8	0.0	2.2
Nonferrous metals	136.9	3.2	0.0
Office and store equipment	108.8	0.2	-1.0
Paperboard	133.3	-1.2	-4.8
Paper boxes and shipping containers	129.3	-0.1	-1.1
Paper office supplies	121.4	0.7	-0.8
Paint	125.3	0.5	4.1
Plastic resins	122.3	0.2	-4.2
Precision measuring tools	128.8	0.0	2.8
Pumps and compressors	119.7	0.2	3.5
Refactories	123.0	0.0	3.1
Rubber belts and belting	118.8	-0.1	3.2
Scales and balances	109.1	0.0	2.2
Switch gear	124.6	0.1	4.4
Textiles, synthetic fibers	106.5	0.2	0.3
Textiles, gray fabrics	117.4	0.8	1.5
Tires and tubes	96.5	-0.5	-0.8
Transformers and power regulations	121.0	1.0	2.3
Welding equipment	127.8	0.3	4.3
Wire and cable	143.5	2.1	0.4

Industrial prices



Source: Bureau of Labor Statistis

PROCUREMENT

Perception versus reality

The Purchasing Managers' Index (PMI) fell again in September, the third consecutive month it has traveled lower. Manufacturing health, according to the approximately 300 buyers surveyed by the National Association of Purchasing Managers (NAPM), is ailing. In June, the PMI stood at 51.1, implying expansionary conditions for both the manufacturing sector and the economy overall. Just three months later, the PMI now resides at 44.4, its lowest level since December of 1982, when the current expansion began.

A number of factors should be considered. First, while a PMI reading of less than 50 signals worsening conditions, the index has to fall below 44 before indicating a decline in real gross national product (GNP). With September being the final month of the third quarter, a decline in real GNP wouldn't show up until the fourth quarter data is out, at which time the perception from decision makers will hopefully be unaffected by Iraq.

Currently, accelerating oil prices and potential conflict in the Middle East are significantly altering perception away from reality. At some point, a solution to Saddam Hussein will be arrived at and oil prices will come tumbling down. Given the underlying fundamentals in our economy have changed little since June, when the PMI reached its 1990 peak, it seems that once tensions in the Persian Gulf are eased, the domestic economy will return to the expansionary conditions which prevailed prior to this crisis.

Returning to the latest Report on Business from the NAPM, new export orders continued to be a sign of strength, displaying expansionary conditions for the 33rd consecutive month. Conversely, employment came in below 50 for the 19th consecutive month (41.5). Good news did come from 88% of the survey respondents, who say that capital spending plans over the next 12 months have not been revised.

Investment outlook

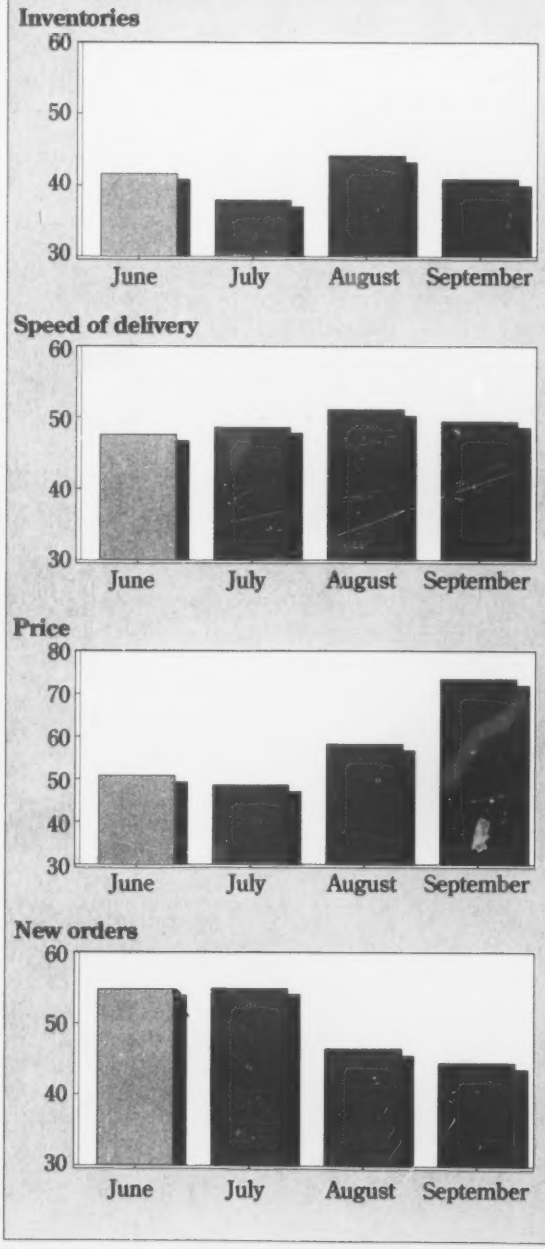
Inventory and capital investment greatly impact quarter-to-quarter changes in gross national product (GNP). They also play major roles in the determination of an economy's business cycle.

Currently, economists at Prudential are predicting that a short-term (two to three quarter) buildup in inventories will, along with moderate increases in capital spending, stabilize the economy in the short

NAPM procurement trends

(Seasonally adjusted diffusion indexes)

An index where 50 is defined as the neutral level, to the extent a reading is above 50, it represents an expansionary tendency. More particularly, rising inventory prices, and new orders are seen as positive signs of economic growth. A trend towards slower deliveries is similarly interpreted.



run and keep the nearly eight-year-old expansion flying.

After stagnating in the second half of 1989, industrial activity picked up last February. Though production has dipped since spring, the productivity of capital is stable, implying that capital's return on investment remains good. In addition, the NAPM's purchasing managers' index and Federal Reserve's production index remain above levels associated with recession. All this suggests that no plunge in factory output is imminent and that business fixed investment will remain healthy.

While the oil shock has little short-run effect on capital spending decisions, it does alter inventory activity. Near-term incentives to boost stocks are now presenting themselves to buyers. First, the Fed has pursued a policy of easier money since mid-1989, making the cost and availability of financing inventory the best in over a year. Second, rising oil prices mean greater future production costs. In order to hedge against tomorrow's higher input costs and buffer the price shock to customers, current inventory holdings will be beefed up.

Speculative additions to inventories and continued investment in equipment should offset any near-term consumer spending slump which the current environment of uncertainty might incite.

LATEST SPOT MARKET PRICES

	Latest price	Previous month	Year ago
FERROUS METALS			
Steel, bars, stainless, 303, cwt	190.00	188.00	179.00
Steel, bars, HR carbon, 1000 series, cwt	19.20	19.20	21.00
Steel, bars, HR carbon alloy, cwt	25.00	25.00	24.50
Steel, bars, CF carbon 12L14, cwt	34.00	34.00	34.50
Steel, plates, carbon, cwt	23.25	23.25	25.20
Steel, plates, strip mill, cwt	23.60	23.60	23.60
Steel, plates, alloy, cwt	34.05	34.55	34.55
Steel, sheets, C.R., class 1, cwt	30.65	30.65	29.65
Steel, sheets, HR, cwt	23.00	23.00	22.25
Steel, sheets, stainless, 304, cwt	124.00	124.00	124.00
Steel, strip, HR carbon, cwt	22.10	22.10	22.10
Steel, strip, CR carbon, cwt	36.18	36.18	38.30
NONFERROUS METALS			
Aluminum, unalloyed ingot, lb	0.84	0.83	0.82
Aluminum, alloyed ingot, 355, lb	1.10	0.93	0.95
Aluminum, secondary ingot, 380, 30000 lb lot	0.81	0.80	0.73
Antimony, lb, merchant	0.85	0.85	0.95
Cadmium, N.Y., dealer, lb	2.60	2.90	4.60
Copper, electrolytic wire bars, lb	1.42	1.42	1.19
Copper, cathode, full plate, lb	1.31	1.32	1.10
Gold, N.Y., troy oz	389.40	387.00	402.90
Lead, common, N.Y., lb	0.47	0.50	0.42
Magnesium, pig ingot, (99.8%), lb	1.63	1.63	1.63
Mercury, 50 fl. lots, N.Y., fl.	250.00	260.00	270.00
Molybdenum, oxide, canned, lb	3.35	3.35	3.32
Nickel, cathode, dealer, lb	4.20	5.20	5.85
Platinum, dealer, oz	441.00	498.00	494.00
Silver, N.Y., troy oz	4.73	4.80	5.20
Tin, N.Y., dealer, lb	2.75	2.78	4.38
Zinc, high grade, lb	0.73	0.81	0.82
Zinc, die casting alloy, No. 3, lb	0.81	0.89	0.74
PAPER (unit=ton)			
Uncoated book #3 offset	940.00	940.00	940.00
Uncoated bond #4, 83 bright	940.00	880.00	900.00
Watermarked bond, 20 lb sheets	1090.00	1090.00	1095.00
Unbleached kraft paper, grocery bag, 30 lb	630.00	630.00	660.00
Bleached kraft, grocery bag, 30 lb	800.00	800.00	800.00
Solid bleached kraft paperboard, folding	830.00	830.00	830.00
Kraft linerboard, 42 lb, domestic, East	370.00	370.00	410.00
Newsprint, 30 lb, East	565.00	565.00	540.00
TEXTILES (unit=lb)			
Acrylic, open-end spun, 1/18	1.43	1.52	1.50
Carded cotton, ring-spun, 18/1	1.58	1.61	1.61
Carded cotton, open-end spun, 18/1	1.46	1.46	1.40
Combed cotton, ring-spun, 100%, 18/1	1.83	1.83	1.85
Nylon, textured, 70/2	2.70	2.70	2.45
Polyester, 50/50% carded cotton, 30/1	1.73	1.83	1.87
Polyester, ring-spun, 100%, 18/1, unbranded	1.50	1.64	1.60
Rayon, high-wet modulus	1.36	1.36	1.34
CHEMICALS			
Acrylonitrile, tanks, lb	0.35	0.35	0.40
Ammonia, anhydrous, tankcars, ton	100.00	90.00	123.00
Benzene, gal	1.70	1.30	1.50
Caustic soda, metric ton	355.00	355.00	320.00
Cresylic acid (over 25%), tanks, lb	0.55	0.55	0.55
Formaldehyde, 37%, (12%-15% meth.), tanks, lb	0.14	0.13	0.11
Glycerine, synthetic, 96%, tanks, lb	0.74	0.74	0.79
Methanol, syn., barges, f.o.b. Gulf Coast	0.35	0.40	0.50
Naphthalene, crude, tanks, lb	0.17	0.17	0.16
Phthalic anhydride, molten, tanks, lb	0.39	0.39	0.41
Polyethylene resin, low density, lb	0.40	0.38	0.52
Polypropylene, homopolymer, lb	0.45	0.40	0.51
Polystyrene, general purpose grade	0.50	0.50	0.59
Polyvinyl chloride, pipe grade, lb	0.36	0.36	0.44
Soda ash, light 58%, 100 lb, paper bags	150.00	150.00	135.00
Styrene monomer, 99.6%, tanks, lb	0.43	0.41	0.49
Sulfur, dark, Tampa, FL, long-ton	134.00	128.00	142.00
Sulfuric acid, 66%, commercial, tanks, ton	69.89	69.89	66.86
Titanium dioxide, anatase, reg., carlots lb	1.02	1.02	0.95
Xylene, Gulf Coast, spot, barge, gal	1.50	1.29	0.95
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	341.33	341.33	345.63
Lumber 2x4 pine, mbf, cl	337.06	337.06	321.47
Plyform, 3/4", msf, cl	645.91	645.91	570.00
Plywood, 5/8", msf, cl	375.20	375.20	360.21
Cement, type 1, bulk, ton	63.22	63.22	63.88
Sand, concrete, ton, cl	6.88	6.88	7.17
Ready-mix concrete, 3000 psi/cu. yd.	49.28	49.28	48.81
Crushed stone, base course, ton, cl	6.29	6.29	5.84
Concrete blocks, sand/gravel, 8"x8"x16", per hundred	84.64	84.64	87.17
Reinforcing bars, grade 60; per cwt	22.01	22.04	22.10
Asphalt paving AC-20, ton	107.32	107.32	108.53
Concrete sewer pipe, 24", per ft, cl	17.88	17.41	18.00
FUELS			
Crude oil (W. TX Int.), bbl	35.50	28.00	20.40
Diesel (reseller rack, Chi.), gal	0.93	0.77	0.51
Heating oil No. 2 (N.Y.), gal, spot	0.95	0.77	0.56
Heating oil No. 2 (Gulf spot), gal, spot	0.93	0.77	0.48
Fuel oil No. 6 (N.Y.), tank car contract	23.00	21.25	18.75
Gasoline (prem unlded N.Y.), gal, spot	0.99	0.91	0.78
Gasoline (reg unlded N.Y.), gal, spot	0.93	0.86	0.59
Kerosene (reseller rack, Chi.), gal	1.02	0.86	0.60
SCRAP MATERIALS			
Aluminum, old sheet & cast, cl	0.50	0.49	0.43
Aluminum, secondary smelters, mixed clips	0.55	0.54	0.50
Brass, yellow solids, carloads	0.64	0.64	0.57
Copper, No. 1, brass ingot makers', carload	1.07	1.10	0.93
Copper, No. 2, brass ingot makers', carload	0.95	0.99	0.84
Steel, no. 1, hvy., dlvd., Pitts., ton	113.00	119.00	99.00
Steel, no. 1, hvy., dlvd., Chi., ton	112.00	116.00	108.00
Zinc, old, smelters scrap, cl	0.30	0.30	0.35
Zinc, die cast slab, smelters scrap, cl	0.36	0.36	0.37

Sources: Metals Week, American Metal Market, Engineering News-Record (20-city averages), America's Textiles International, Journal of Commerce, Chemical Marketing Reporter, Pulp and Paper Week.

* This page has been revised to better serve you.